

Applicant: STEMMLER
U.S. Serial No.: 09/492,214
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Please amend the above-identified application as follows:

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (canceled)

Claim 2 (canceled)

Claim 3 (previously presented) The method according to Claim 42 in which the analyte comprises a nucleic acid.

Claim 4 (previously presented) The method according to Claim 44 in which the method is an immuno-affinity assay.

Claim 5 (previously presented) The method according to Claim 42 in which the analyte determination is performed or effected in a volume of less than 1 μ l.

Claim 6 (canceled)

Claim 7 (canceled)

Claim 8 (canceled)

Claim 9 (canceled)

Claim 10 (previously presented) The method according to Claim 42 in which the labeled

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competitive substance is a fluorescent labeled reagent.

Claim 11 (previously presented) The method according to Claim 42 in which the sample is in a liquid phase.

Claim 12 (previously presented) The method according to Claim 42 in which the solid phase is formed on a wall of a well in a sample carrier.

Claim 13 (previously presented) The method according to Claim 12 in which the carrier is a micro-titre or nano-titre plate.

Claim 14 (previously presented) The method according to Claim 12 in which the well has a quadratic, cylindrical, truncated pyramid or truncated cone shape.

Claim 15 (previously presented) The method according to Claim 12 in which the well has an aperture area and a floor area, the aperture area being smaller than the floor area.

Claim 16 (previously presented) The method according to Claim 15 in which the well has a truncated pyramid or truncated cone shape.

Claims 17 – 18 (canceled)

Claim 19 (previously presented) The method according to Claim 42 in which the measurement signal is obtained by spatially staggered measurement.

Claim 20 (canceled)

Claim 21 (previously presented) The method according to Claim 42 in which a light beam is used to excite the sample, said light beam having a diameter of less than 40 μm .

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Claim 22 (canceled)

Claim 23 (previously presented) The method according to Claim 21 in which a laser provides the light beam.

Claims 24 – 32 (canceled)

Claim 33 (previously presented) The method according to Claim 5 in which the volume is in the range of 50 to 100 nl.

Claim 34 (previously presented) The method according to Claim 13 in which the sample carrier is a nano-titre plate.

Claim 35 (previously presented) The method according to Claim 42 in which the quenching substance is a metal, dye or fluorescence-quenching substance.

Claim 36 (previously presented) The method according to Claim 23 in which the light beam has a diameter of about 20 μm .

Claims 37 – 41 (canceled)

Claim 42 (previously presented) A method for quantitative or qualitative determination of an analyte comprising:

(a) incubating a sample containing the analyte with a labeled competitive substance and a solid phase coated with a quenching substance, wherein the solid phase further comprises an analyte-specific bonding partner immobilized thereto, such that the analyte and the labeled competitive substance compete for binding to the analyte-specific bonding partner, wherein the quenching substance suppresses signal from the labeled competitive

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substance bound to the solid phase;

(b) exciting the sample so as to generate signal from unbound labeled competitive substance; and

(c) measuring the signal only generated from the unbound labeled competitive substance in a defined volume of liquid phase, thereby quantitatively or qualitatively determining the analyte, wherein the determination of the analyte is performed or effected without physically separating the unbound and bound labeled competitive substance.

Claim 43 (previously presented) The method according to Claim 42, wherein the quenching substance is gold, silver or graphite.

Claim 44 (previously presented) The method according to Claim 42, wherein the labeled competitive substance is selected from the group consisting of antigen, antibody, nucleic acid, ligand or receptor.

Claims 45-59 (canceled)

Claim 60 (previously presented) A method for qualitative determination of an analyte comprising:

(a) incubating a sample containing the analyte with a labeled competitive substance and a solid phase coated with a quenching substance, wherein the solid phase further comprises an analyte-specific bonding partner immobilized thereto, such that the analyte and the labeled competitive substance compete for binding to the analyte-specific bonding partner, wherein the quenching substance suppresses signal from the labeled competitive substance bound to the solid phase;

(b) exciting the sample so as to generate signal from unbound labeled competitive substance; and

(c) measuring the signal only generated from the unbound labeled competitive substance, thereby qualitatively determining the analyte, wherein the determination of the analyte is

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performed or effected without physically separating the unbound and bound labeled competitive substance.

Claim 61 (previously presented) The method according to Claim 60, wherein the signal generated from the unbound labeled competitive substance is measured in a defined volume of liquid phase.

Claim 62 (new) The method according to Claim 60 in which the analyte comprises a nucleic acid.

Claim 63 (new) The method according to Claim 60, wherein the labeled competitive substance is selected from the group consisting of antigen, antibody, nucleic acid, ligand or receptor.

Claim 64 (new) The method according to Claim 63 in which the method is an immuno-affinity assay.

Claim 65 (new) The method according to Claim 60 in which the analyte determination is performed or effected in a volume of less than 1 μ l.

Claim 66 (new) The method according to Claim 60 in which the labeled competitive substance is a fluorescent labeled reagent.

Claim 67 (new) The method according to Claim 60 in which the sample is in a liquid phase.

Claim 68 (new) The method according to Claim 60 in which the solid phase is formed on a wall of a well in a sample carrier.

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Claim 69 (new) The method according to Claim 68 in which the sample carrier is a micro-titre or nano-titre plate.

Claim 70 (new) The method according to Claim 68 in which the well has a quadratic, cylindrical, truncated pyramid or truncated cone shape.

Claim 71 (new) The method according to Claim 68 in which the well has an aperture area and a floor area, the aperture area being smaller than the floor area.

Claim 72 (new) The method according to Claim 71 in which the well has a truncated pyramid or truncated cone shape.

Claim 73 (new) The method according to Claim 60 in which the measurement signal is obtained by spatially staggered measurement.

Claim 74 (new) The method according to Claim 60 in which a light beam is used to excite the sample, said light beam having a diameter of less than 40 μm .

Claim 75 (new) The method according to Claim 74 in which a laser provides the light beam.

Claim 76 (new) The method according to Claim 65 in which the volume is in the range of 50 to 100 nl.

Claim 77 (new) The method according to Claim 69 in which the sample carrier is a nano-titre plate.

Claim 78 (new) The method according to Claim 61 in which the quenching substance is a metal, dye or fluorescence-quenching substance.

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Claim 79 (new) The method according to Claim 75 in which the light beam has a diameter of about 20 μm .

Claim 80 (new) The method according to Claim 60, wherein the quenching substance is gold, silver or graphite.